

"calculating from the signal-to-noise ratio a low-power condition error contribution," as recited in claim 1 of the application.

The Applicant respectfully traverses this rejection. Both the Comp and Ray articles disclose methods of handling "multipath" errors, not low-power errors. As described on page 264 of the Comp article, "multipath refers to the presence of signals arriving at an antenna by means of multiple reflected paths." Multipath in the context of a LAAS system is illustrated in Fig. 1 of the Ray article. Notably, as illustrated in the Ray article, multipath refers to the effects introduced when a signal from a single source (e.g., the satellite in Fig. 1) reaches a receiver (the "antenna array" in Fig. 1) after being reflected along multiple paths. Because different parts of the signal have followed different paths to reach the receiver, those different parts generally have different phases, and they tend to interfere with one another. This is, as noted in the Comp and Ray articles, one source of error in the global positioning system (GPS).

Another, different source of error is a low-power condition. This is the source of error addressed in the application. As described in the application, a low-power condition can result from thermal noise and broadband white noise. Thermal noise and broadband white noise is not the same as multipath.

Neither the Comp nor the Ray articles disclose any step of calculating a low-power condition error contribution from a signal-to-noise ratio, as recited in claim 1. Rather, they deal only with estimating and mitigating multipath errors.

The Examiner has cited page 186 of the Ray article in rejecting the claims of the application. That page, however, only highlights the differences of that article from the claims of the application. There, the Ray article describes how multipath can affect the measured signal power at a receiver. Nowhere, however, does the Ray article disclose or suggest calculating a low-power condition error contribution from that measured signal power or from a signal-to-noise ratio. Instead, the Ray article

merely notes that a signal-to-noise ratio can be used to estimate multipath but that doing so "poses several problems."

Like the Ray article, the Comp article does not disclose or suggest any step of calculating a low-power condition error contribution from a signal-to-noise ratio.

### **B. Claims 2-22**

In the Office Action, the Examiner has addressed only the elements of claim 1 that are purported to be disclosed in the prior art. The Examiner has not identified any element of claims 2 through 22 that is disclosed or suggested in the prior art. Accordingly the Examiner has not presented a *prima facie* case of invalidity for those claims, and the applicant traverses the rejection.

The applicant respectfully requests that the Examiner, upon reconsidering the rejection of claims 2-22, consider the applicant's remarks above with respect to the differences between the invention of claim 1 and the Comp and Ray articles.

### **III. Conclusion**

For the reasons given above, the Applicant considers the claims to be in a condition for allowance. Early notification to that effect is solicited. If the Examiner has any questions or identifies any issues that can be resolved over the telephone, the Examiner is invited to contact the Applicant's representative at the number given below.

Respectfully submitted,



\_\_\_\_\_  
Jeffrey A. Steck  
Reg. No. 40,184

Dated: November 1, 2004